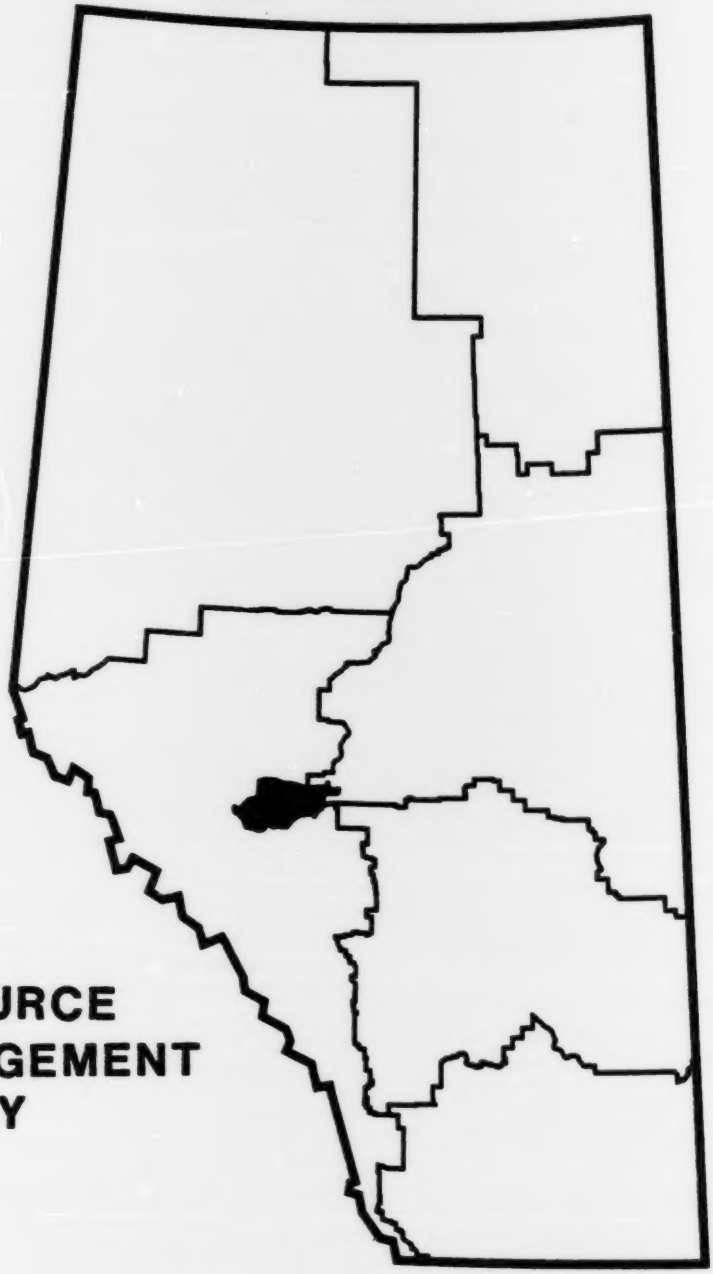
5.

INTEGRATED RESOURCE PLAN:

BRAZEAU-PEMBINA

SUB-REGIONAL PLAN



RESOURCE MANAGEMENT POLICY

Alberta
ENERGY AND NATURAL RESOURCES
Resource Evaluation and Planning Division

Integrated Resource Plan

BRAZEAU - PEMBINA

Sub-Regional Plan

RESOURCE MANAGEMENT POLICY

1982

EDMONTON

Alberta

ENERGY AND NATURAL RESOURCES
Resource Evaluation and Planning Division

ENR In-house Report Number: Dept/26

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PLANNING TEAM DECISION SHEET

NUMBER 3

TEAM Brazeau-Pembina

DATE August 9, 1982

TO Resource Integration Committee

ITEM

Resource Management Policy

DECISION/REQUEST

Approval of the Resource Management Policy document and zoning map.

SIGNATURES

Gerry Ward, Public Lands Division

Dave Christiansen, Fish and Wildlife Division

Mary Penny, Mineral Resources Division

Jim Molnar, Alberta Forest Service

Brian Fardoe, Resource Planning Branch

COMMENTS

RESOURCE INTEGRATION COMMITTEE
DECISION SHEET

DATE August 10, 1982

TO: Brazeau-Pembina Planning Team

ITEM

Resource Management Policy

BACKGROUND/ATTACHMENTS

The Terms of Reference document was approved by the Resource Integration Committee in January, 1980. The Resource Integration Committee selected the policy direction for resource management in June and July, 1982. Approval of the Resource Management Policy allows the planning team to proceed with the remaining steps of the planning process.

DECISION/DIRECTION/RECOMMENDATION

The Resource Integration Committee approves the Resource Management Policy, subject to the revisions indicated to Brian Fardoe at the August 10, 1982 meeting.

SIGNATURES

COMMENTS

Alberta Agriculture disagrees with the allocation to Multiple Use zoning, of those lands which have been identified through the planning process, as being suitable for agricultural use (approximately 48,000 acres).

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1. INTRODUCTION

A Policy for Resource Management of the Eastern Slopes (Eastern Slopes Policy), approved by Cabinet in July, 1977, identified integrated resource management planning under a comprehensive interagency approach as the means for effective management of the resources of the Eastern Slopes region of Alberta. To implement this policy, the Resource Planning Branch of the Alberta Department of Energy and Natural Resources has been given the responsibility of coordinating the preparation of integrated resource management plans on a priority basis for agencies with resource management concerns for public lands and resources within designated planning areas.

In January, 1978 the Energy and Natural Resources/Recreation and Parks Interdepartmental Assistant Deputy Ministers Committee, acting upon a request from the Alberta Forest Service, identified the Rocky-Clearwater Forest as a priority for integrated resource management planning. In response to a directive from this Committee, the Rocky-Clearwater Management Overview (Overview) was initiated in April, 1978 and completed for approval by the Resource Integration Committee in May, 1980. The Overview provided a framework for integrated resource management planning in the Rocky-Clearwater region and established priorities for the completion of plans within the region.

The Overview Interim Report, presented to the Resource Integration Committee in March, 1979, identified the Brazeau-Pembina area as the first priority for integrated resource management planning and a plan

for this area was initiated as part of the 1979/80 planning program. A Terms of Reference document for the Brazeau-Pembina Sub-regional Plan was prepared by an interdepartmental planning team and received approval from the Resource Integration Committee in January of 1980. The Terms of Reference identified the purpose of the plan, the planning area boundary and major resource management concerns and issues. It also provided a brief explanation of the planning process. The preparation and approval of the Terms of Reference document constituted the first stage of the planning process. This stage was followed by the initiation of data collection and analysis, which continues throughout the development of the plan.

Policy formulation was the next stage of the planning process as described in the Terms of Reference document. A Resource Management Policy was developed for the Brazeau-Pembina Plan and is presented in this document and the accompanying maps (map pocket). This document is organized into the following sections: a description of the planning area, a brief review of the existing policy and planning context for resource management, discussion of the plan's policy formulation process, a statement of broad resource management objectives for the planning area and presentation of the resource management policy including specific resource management objectives and zoning. Refinement of the zoning contained in the Resource Mangement Policy may occur during later stages of the planning process. As an intermediate document, the Resource Management Policy provides direction to the planning team and acts as an interim statement of progress towards the final plan.

2. THE PLANNING AREA

The Brazeau-Pembina Planning Area is a 2950 km^2 tract of land located southwest of the town of Drayton Valley in west central Alberta (See Figure 1). The planning area encompasses portions of the watersheds of the Pembina, Blackstone and Brazeau Rivers and the entire Elk River watershed. The boundary of the planning area, roughly speaking, is as follows:

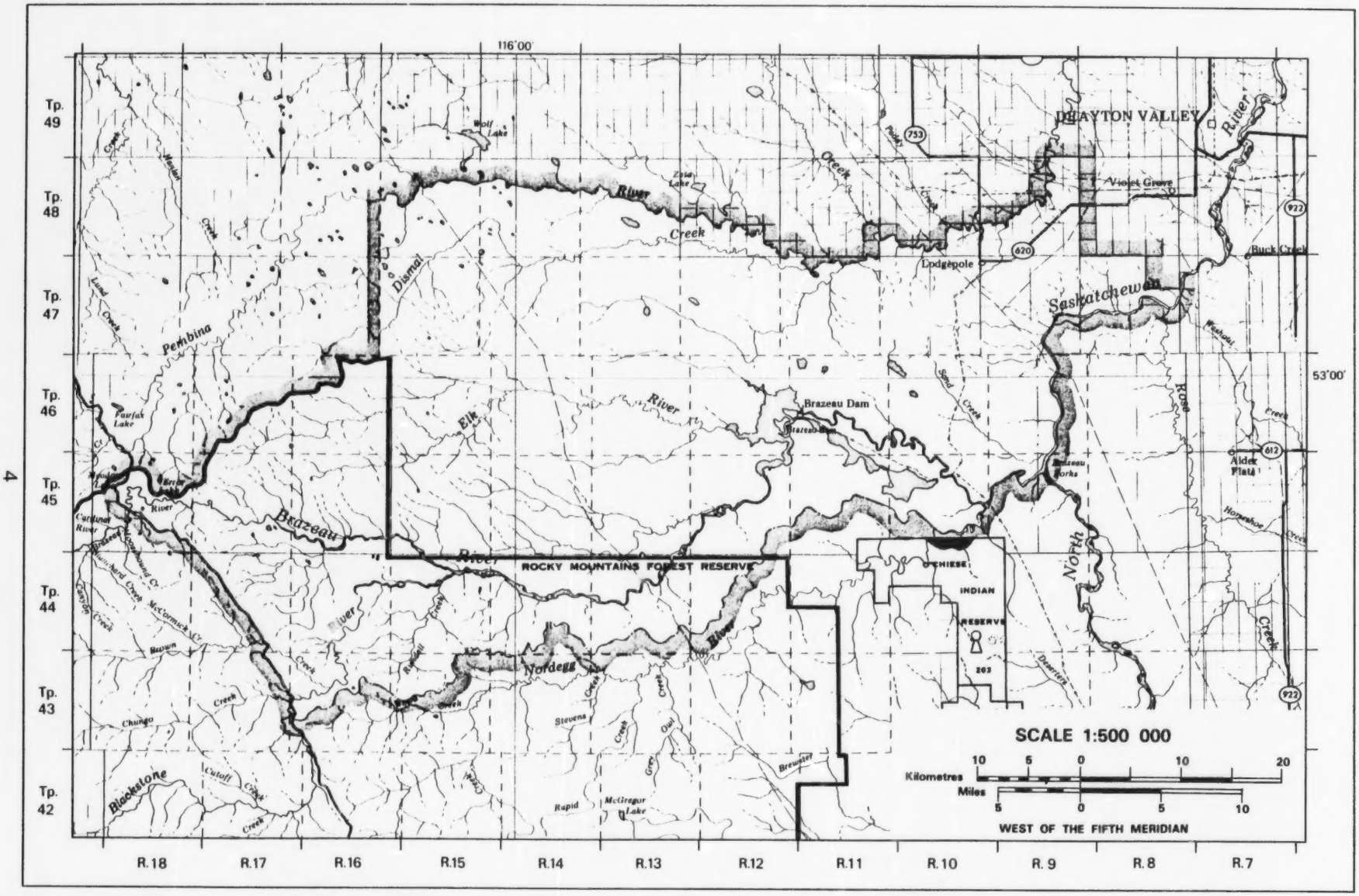
North - the south bank of the Pembina River to the east side of Range 16-W5 then south to the watershed divide between Dismal Creek and the Elk River - west following the watershed divide between the Pembina and Brazeau Rivers to the Forestry Trunk Road

West - south along the Forestry Truck Road to the watershed divide between the Blackstone and Nordegg Rivers

South - east along the divide between the Brazeau and Nordegg Rivers to the confluence of these two rivers then east along the north shore of the Brazeau River to the confluence with the North Saskatchewan River

East - north along the west bank of the North Saskatchewan to the Green Area boundary then along this boundary to the Pembina River

The Brazeau-Pembina Sub-regional Plan is bordered on the south by the Rocky-North Saskatchewan Sub-regional Plan and on the west by the Nordegg- Red Deer River Sub-regional Plan.



BRAZEAU-PEMBINA PLANNING AREA

Figure 1. Brazeau - Pembina Planning Area.

3. POLICY AND PLANNING CONTEXT

Resource management activities in the Brazeau-Pembina Planning Area are guided by numerous government directives, including legislation, regulations and policies, which must be considered in the development of the Brazeau-Pembina Sub-regional Plan.

3.1 Legislation and Associated Directives

A variety of provincial Government agencies administer a range of legislation and associated regulations to manage resources throughout Alberta, including the resources of the Brazeau-Pembina Planning Area. In addition to legislation and regulations, there are also governmental directives such as orders-in-council and ministerial orders, which affect resource management activities.

Approximately the western quarter of the Brazeau-Pembina Planning Area is within the Rocky Mountain Forest Reserve. The Forest Reserve was formally established by the Forest Reserves Act (1964) to provide for the conservation of forests and the maintenance of conditions favourable to an optimum water supply.

The entire Brazeau-Pembina Planning Area is within the Green Area which was established by order-in-council in 1948. The Green Area contains lands which are not available for settlement or agricultural

development other than grazing. Major realignment of the Green Area / White Area boundary generally occurs through development of an integrated resource management plan and minor realignment of the boundary occurs on an ongoing basis through negotiation among involved Government agencies.

3.2 A Policy for Resource Management of the Eastern Slopes

A Policy for Resource Management of the Eastern Slopes provides guidelines and objectives for integrated resource management and planning for the entire Eastern Slopes Region including the Brazeau-Pembina Planning Area. The overriding principles or objectives for the Eastern Slopes Policy are to protect the valuable water resources of the Eastern Slopes and provide for resource utilization in a manner consistent with principles of conservation and environmental protection. The Eastern Slopes Policy relies on regional land use zoning to designate large areas of land for varying degrees of protection, resource management and development. Under the Eastern Slopes Policy, a range of resource management objectives which can be achieved are defined for each of the following eight zones: (1) Prime Protection, (2) Critical Wildlife, (3) Special Use, (4) General Recreation, (5) Multiple Use, (6) Agriculture, (7) Industrial and (8) Facility.

The Brazeau-Pembina Plan utilizes the eight zoning categories defined in the Eastern Slopes Policy. Evaluation and modification of the existing zone boundaries (map pocket) occurred through the planning

process. The integrated resource management plan is more specific than the regional Eastern Slopes Policy in identifying areas for various resource uses. The general intents or objectives of the Eastern Slopes Policy zones, as interpreted by the planning team, are presented in Table 1. A list of resource use activities which are permitted, restricted or prohibited within each zone is presented in the Eastern Slopes Policy as a matrix (Table 2). Rather than creating an entirely new zoning scheme for the small area outside the Eastern Slopes Policy but within the planning area, the Eastern Slopes Policy zoning categories were used. Zoning does not apply to privately owned lands in the planning area.

The recent administrative review of the Eastern Slopes Policy has produced four changes to the matrix of resource use activities contained in the 1977 Eastern Slopes Policy. Domestic grazing and petroleum and natural gas exploration and development were changed by the Cabinet from "not permitted" to "restricted" designations in the General Recreation zone. These two changes were announced by the Associate Minister of Public Lands and Wildlife in May, 1982. Changes of mineral exploration and development in the Critical Wildlife zone and logging in the Facility zone from "not permitted" to "restricted" designations have been approved by the Resource Integration Committee, subject to Cabinet ratification.

In addition, the administrative review has resulted in the clarification and production of proposed provincial goals and regional

TABLE 1

PLANNING TEAM INTERPRETATION OF THE
INTENTS OF THE EASTERN SLOPES POLICY ZONES

#	Zone	INTENT OF THE ZONE[1]
1	Prime Protection	To preserve environmentally sensitive terrain and valuable aesthetic resources.
2	Critical Wildlife	To protect specific fish and wildlife populations by protecting aquatic and terrestrial habitat that is essential to the maintenance of those populations.
3	Special Use	To recognize historical resources, scientific research areas and lands which have unique management requirements or legislative status or which can not be accomodated elsewhere.
4	General Recreation	To retain a variety of natural environments to serve as a focus for a wide range of outdoor recreational activities.
5	Multiple Use	To provide for the management and development of the full range of available resources, while meeting long term objectives for watershed management and environmental protection.
6	Agriculture	To designate lands which are presently utilized or are considered suitable for cultivation or improved grazing.
7	Industrial	To recognize existing or approved industrial operations.
8	Facility	To recognize existing or approved settlement and commercial development areas.

1. The concept of integrated resource management applies to each of the eight zones.

Table 1. Planning Team Interpretation of the Intents of the Eastern Slopes Policy zones.

ACTIVITY / ZONE	1 Prime Protection	2 Critical Wildlife	3 Special Use	4 General Recreation	5 Multiple use	6 Agriculture	7 Industrial	8 Facility
Non-Mechanical Recreation	/	/	R	/	/	/	R	/
Fishing	/	/	R	/	/	/	R	/
Hunting	/	/	R	R	/	/	R	X
Non-Motorized Trails	R	R	R	/	/	/	R	/
Off Highway Vehicle Activity	X	R	R	R	/	/	/	/
Primitive Camping	R	R	R	/	/	/	X	X
Serviced Camping	X	X	R	/	/	R	X	/
Intensive Recreation	R	X	R	/	/	X	X	/
Scientific Study	/	R	R	R	/	/	/	/
Trapping	/	R	R	R	/	/	X	X
Logging	X	R	R	R	/	/	/	R
Cultivation	X	X	R	X	R	/	X	R
Domestic Grazing	X	R	R	R	/	/	X	R
Petroleum and Natural Gas Exploration & Development	X	R	R	R	/	/	/	R
Mineral Exploration & Development	X	R	R	X	/	/	/	X
Coal Exploration & Development	X	R	R	R	/	/	/	X
Transportation & Utility Corridors	R	R	R	R	/	/	/	/
Commercial Development	X	X	R	R	R	R	X	/
Industrial Development	X	X	R	X	/	R	/	R
Residential	X	X	R	X	R	/	R	/

/ Permitted Uses - Uses that will be allowed under normal guidelines and land use regulations.

X Not Permitted - Uses that are not compatible with the intent or capabilities of a land use zone.

R Restricted - Uses that may be compatible under certain circumstances and stricter than normal controls.

Table 2. Table of permitted activities by land use zone.

objectives for resource management which may be included in the Eastern Slopes Policy. These provide additional direction for resource management in the Brazeau-Pembina Planning Area and have received preliminary approval from the Resource Integration Committee. These provincial goals and regional objectives are presented in Table 3.

3.3 A Coal Development Policy for Alberta

The entire Brazeau-Pembina Planning Area is categorized under A Coal Development Policy for Alberta (Coal Policy). This policy, approved by Cabinet in June, 1976, provides a strategy for the development of coal deposits in Alberta. Under the Coal Policy, exploration and development of coal deposits are permitted only under strict control to ensure environmental protection and satisfactory reclamation of any disturbed land. The western portion of the planning area is zoned as Category 2 where "limited coal exploration is permitted under strict control" and commercial development is generally restricted to underground or in-situ mining. The eastern portion of the planning area is zoned as Category 3 where "coal exploration is permitted under the normal approval procedures" and commercial development is restricted.

A Coal Development Policy for Alberta is currently being reviewed and the categorization of lands for coal exploration and development may change. The Brazeau-Pembina Plan recognizes this possibility and will take direction from the new Coal Policy as appropriate.

TABLE 3

PROPOSED PROVINCIAL GOALS AND REGIONAL OBJECTIVES

Resource Values	Provincial Goals	Regional Objectives
Watershed	To ensure a continuous reliable supply of clean water to meet the needs of Albertans and interprovincial users now and in the future.	To manage and develop natural resources in the region to maintain or increase the volume of water yield and the natural timing of surface and sub-surface discharge. To manage headwaters in the region to maintain the recharge capabilities and protect critical fisheries habitat. To manage the South Saskatchewan River watersheds intensively to meet a high demand for water stability. To manage the North Saskatchewan and Athabasca River watersheds in order to provide for future increase in water yield through intensive management to maintain natural flow.
Wildlife	To optimize the opportunities for the public to interact with the wildlife resources in a positive manner.	Big Game: Elk (Wapiti) - To ensure elk populations are maintained throughout the region in accordance with habitat availability. This will allow for an increase in elk populations substantially north of the Bow River and a regional goal of 30 000 elk allowing for a supply sufficient for the growing demand into the next few decades. Moose - To increase the moose population to the carrying capacity of known habitat, particularly in the easterly portions of the region. Emphasis should be placed in the southern area due both to the high hunting demands as well as the opportunity of achieving higher population associated with forest management areas. Deer - While-tailed -- To maintain a minimum of 10 000 along the eastern fringe of the region. - Mule -- To increase the mule deer population throughout the region to a minimum of 50 000 head with half of the objective being achieved south of the Bow River. Caribou - To stabilize and increase declining caribou populations throughout the region to a level where species preservation in Alberta is assured through protection and proper management of current and historically important range. The desired increases in population along the Eastern Slopes are at least 2000 to 3000 animals. Bighorn Sheep - To maintain existing populations of approximately 5000 bighorn sheep through protection and enhancement of known critical winter ranges scattered throughout the region. Mountain Goats - To ensure a recovery of mountain goat populations through protection and management of known habitat scattered throughout the sub-alpine and alpine areas. Bear - Black -- To maintain the existing population of black bears by retaining a minimum of 30 percent forest cover over the region. - Grizzly -- To maintain and protect existing grizzly populations and habitat particularly north of the Bow River. Populations of 400 north of the Bow River and 100 South of it would meet demands for this century.

TABLE 3

PROPOSED PROVINCIAL GOALS AND REGIONAL OBJECTIVES
(continued)

Resource Values	Provincial Goals	Regional Objectives
Wildlife		Furbearers: To maintain the variety and abundance of furbearer populations through management of habitat in the region. Upland Game: To maintain the existing population of upland game bird species through habitat management in the region. Raptors: To maintain the existing populations of raptor species through mitigation of disturbances to known populations and critical habitat in the region. Songbirds: To maintain the existing variety and distribution of songbirds found in the region. Threatened Species: To protect and enhance the populations of known threatened species such as cougar and wolverine to a level of self-maintenance through mitigation of disturbances to known populations and critical habitat.
Fisheries	To provide the optimum mix of social and economic benefits consistent with the maintenance of healthy fish communities.	To protect aquatic habitat and ensure high water quality in the region. To establish optimum instream flow requirements for fish through modification of land/water use practices. To recognize the sport fishery as the principle use of the fishery resources in the Eastern Slopes. To maintain naturally reproducing Salmonid (trout, char and whitefish) populations in the region and to expand these fish resources into presently vacant aquatic habitat. To supplement or enhance game fish stocks in the region by stocking when natural reproduction does not occur or is limited.
Recreation	To provide and facilitate the provision of a range of outdoor recreation opportunities in Alberta.	Camping: Parks - To maintain a diverse range of medium-size resource based recreation developments such as Provincial Parks and Forest Recreation Areas within weekend driving range of most of the population to facilitate a foothills and sub-alpine recreational experience.

TABLE 3

PROPOSED PROVINCIAL GOALS AND REGIONAL OBJECTIVES
(continued)

Resource Values	Provincial Goals	Regional Objectives
Recreation		Auto Access - To increase the number of formalized intensive camping opportunities by expanding existing facilities in areas north of the Canmore Corridor. Group Camping - To increase group camping facilities throughout the Eastern Slopes. Remote Camping - To increase the number of camping sites accessible by hiking, horse and off-highway vehicles. Trails: Land Based - To increase the number of kilometres of long distance trails in the region for hiking, skiing, horse and off-highway vehicle use. Water Based - To designate and manage water based trails to provide opportunities for a variety of activities such as canoeing, power boating, kayaking and rafting. Day Use: To maintain existing extensive style day use sites, e.g. rest stops, picnic areas and viewing points, in the Grande Prairie, Edson and Rocky/Clearwater Forests. Visitor Services: To increase the number of self-guiding historical and resource management oriented trails at existing destination camping facilities. To increase the preservation of representative and unique features of natural and/or cultural significance for interpretation, education and appreciation throughout the Eastern Slopes region and particularly in the alpine and sub-alpine ecological region. Wilderness: To maintain within the Eastern Slopes, areas of wilderness or primitive character. Water Access Points: To develop and manage a range of facilities and services to provide access to various water bodies throughout the region.
Forestry	To provide an optimum continuous contribution to the economy by the forest-based industries consistent with sound environmental practices and to recognize other uses of the forest.	Bow/Crow Forest: Crowsnest Portion - To maintain a sustained yield timber supply to established sawmilling facilities and for local public use. - To increase the sustained yield timber supply available to Quota Holders and the general public through an expanded permanent forest land base consistent with optimal forest land allocation.

TABLE 3

PROPOSED PROVINCIAL GOALS AND REGIONAL OBJECTIVES
(continued)

Resource Values	Provincial Goals	Regional Objectives
Forestry		- To ensure a healthy forest environment in this prime recretional area and provide a reasonable supply to timber on a sustained yield basis to wood utilizing facilities and the general public on a short term commitment basis. The high standard of harvest operations will ensure maintenance of aesthetics and a quality environment for the prime use of recreation. Northern Bow Portion (Ghost, Little Red Deer and Burnt Timber River Areas) - To maintain a sustained yield timber supply to established wood utilizing facilities and for local public use. - To increase the sustained yield timber supply available to Timber Quota Holders and/or Forest Management Agreement holders and the general public through an expanded permanent forest land base consistent with optimal forest land allocation. Rocky/Clearwater Forest, Edson Forest, and Grande Prairie Forest - To maintain a sustained yield timber supply to the established wood utilizing facilities and for local public use and increase the sustained yield timber supply available to Timber Quota Holders and/or Forest Management Agreement Holders and for local use consistent with optimal forest land use allocation.
Rangeland	To provide a properly managed forage base of the rangelands for use by wildlife and domestic livestock in conjunction with other land uses.	To maintain rangelands in good condition through sound range management practices and coordination of the management of rangeland resources with other users. To increase rangelands where forage productivity has declined from the encroachment of unproductive bush species by removal of the brush and establishing productive forage species. To increase and improve rangeland availability and capability through more intensive range management. To consider other land uses besides wildlife and domestic grazing in the management of the rangelands.
Agriculture	To encourage the optimal development of the renewable resources for production, processing and marketing of agricultural products for an expanding domestic and export market.	To ensure the continued viability of existing livestock operations in the region through the use of public lands to sustain the current levels of domestic livestock numbers. To provide for the cultivation of lands that are suitable for production of annual and forage crops. To expand domestic livestock grazing opportunities on public lands in that part of the region north of the Trans-Canada Highway to counterbalance the conversion of other lands in the province to cereal and oilseed production.

TABLE 3

PROPOSED PROVINCIAL GOALS AND REGIONAL OBJECTIVES
(continued)

Resource Values	Provincial Goals	Regional Objectives
Tourism	To encourage the provision of a diverse range of private and public sector tourism facilities, attractions, accommodation types and services capable of meeting increasing demands for leisure and business-related opportunities.	To encourage the provision of a wide variety of tourism opportunities and services in the Eastern Slopes. To encourage the development of tourism opportunities and services capable of operation on a year-round basis. To ensure the maintenance of the environmental quality and aesthetics of the Eastern Slopes, while expanding tourism opportunities in the area through: - Grouping tourism facilities and services where feasible (recognizing the need for unique siting and scenic requirements of particular types of facilities. - Ensuring the careful design of facilities to limit environmental impact; and - Encouraging environmentally conscious operation of facilities and services after their completion. To ensure the provision of an adequate land base for tourism activities by maintaining the high aesthetic quality and thus maintaining the value of the tourism experience. To support the provision of tourism opportunities and services by the private sector wherever feasible and to minimize the occurrence of public sector competition with private sector developments for specific tourism markets.
Non-Renewable Resources	To encourage exploration and development of mineral resources to meet the needs of Albertans now and in the future.	Coal: To maintain income and job benefits from coal resources in the Eastern Slopes through basin-by-basin development, with each basin being developed to minimize infrastructure costs. Oil and Natural Gas: To maintain income and job benefits from oil and natural gas resources throughout the region. Quarriable and Metallic Minerals: To maintain income and job benefits from quarriable and metallic mineral resources in the region. Aggregate Resources: To maintain the present and future availability of aggregate resources in the region.
Archaeological/ Ecological/ Historical Resources	To ensure that significant features of archaeological, ecological or historical value are identified, protected and managed for scientific, educational and recreational benefits now and in the future.	To protect both representative and unique areas of natural or cultural provincial significance for the recreational, scientific and educational use of Albertans.

3.4 Rocky-Clearwater Management Overview

The Rocky-Clearwater Management Overview (ENR Report No. 122) was approved by the Resource Integration Committee in May, 1980. The appropriate development strategy or theme for the Brazeau-Pembina plan, as stated in the Overview, is a "multiple use emphasis whereby use of the area for a wide range of activities will be optimized and existing/ potential conflicts will be minimized". The Overview recommends a focus on resource utilization for the Brazeau-Pembina Plan and supports the long term resource management priority of renewable resources over non-renewable resources as stated in the Eastern Slopes Policy.

3.5 Brazeau Timber Development Area

Approximately forty percent of the Brazeau-Pembina Planning Area is within the proposed Brazeau Timber Development Area. The remainder of the Timber Development Area is contained within the Nordegg-Red Deer River Sub-Regional Plan and the Rocky-North Saskatchewan Sub-Regional Plan (Figure 2). The uncommitted timber resources in this area are some of the best in Alberta and proposals for development of this timber are currently being considered by the Alberta Government. Public hearings for the Brazeau Timber Development Area are scheduled for August of 1982.

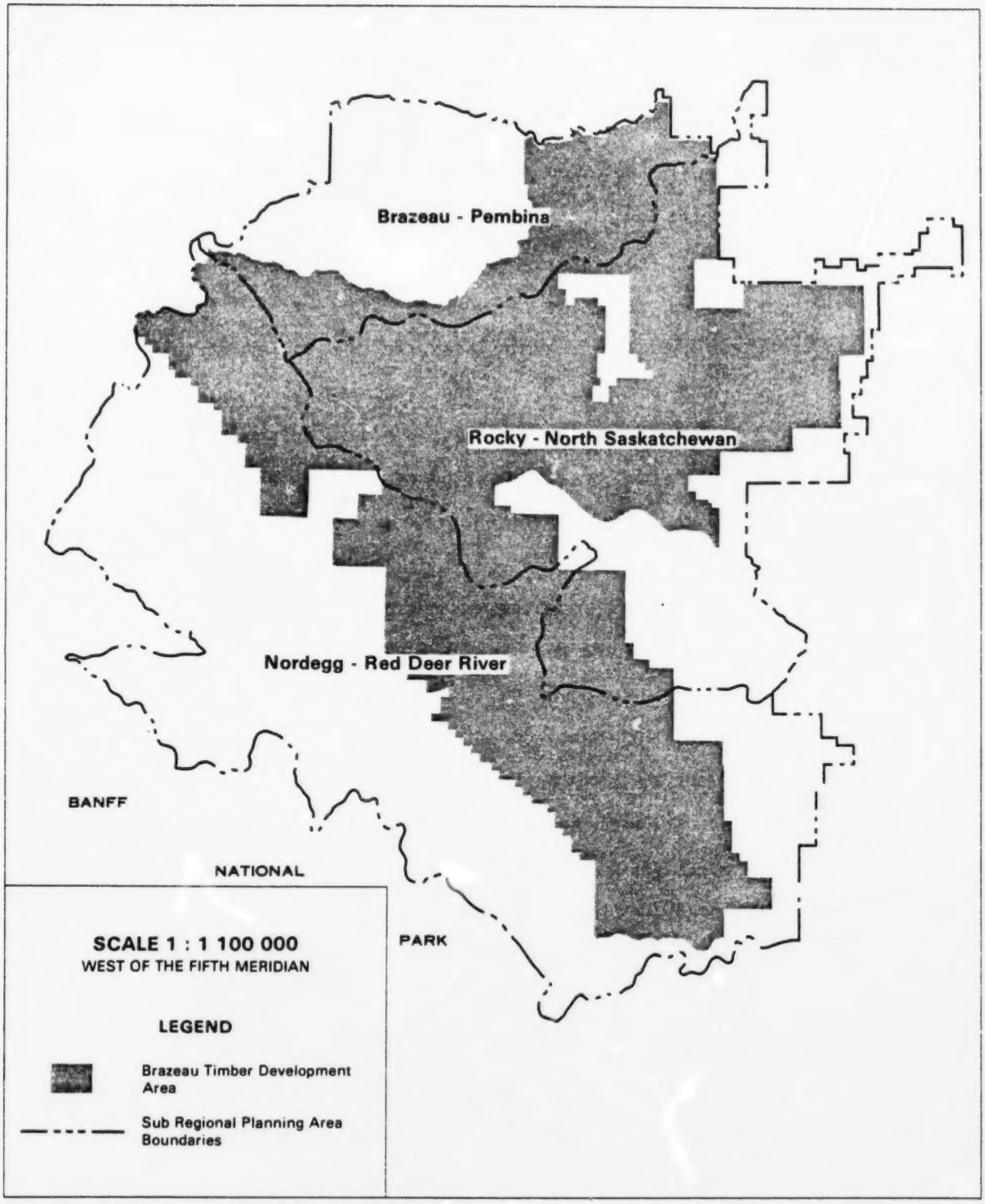


FIGURE 2. BRAZEAU TIMBER DEVELOPMENT AREA

4. PLAN POLICY FORMULATION PROCESS

This section presents a brief description of the process used in formulating resource management policy for the Brazeau-Pembina Sub-regional Plan. The planning team proceeded in the following manner:

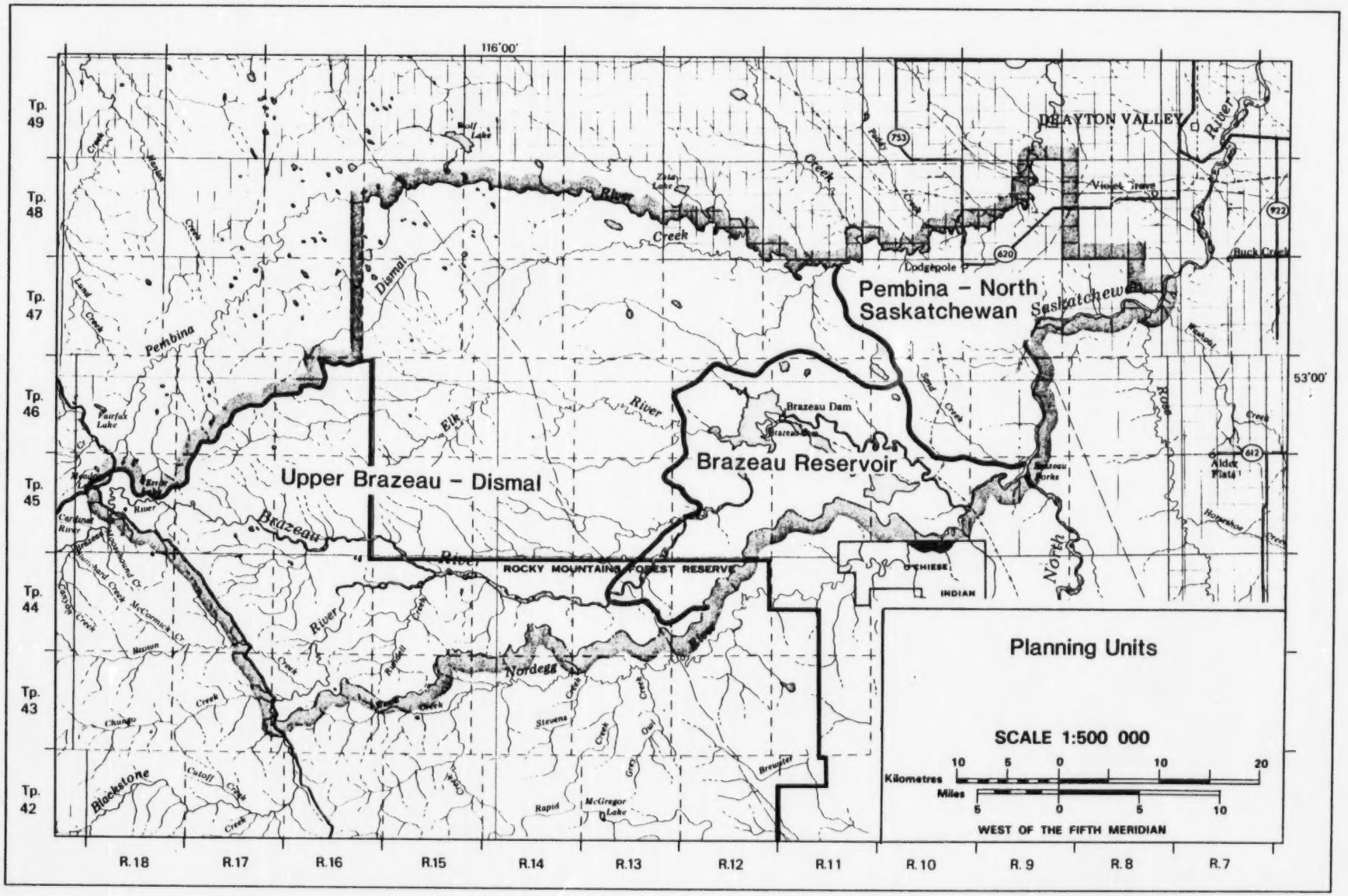
(i) established the planning area and the policy context (Terms of Reference and section 3 of this document).

(ii) collected and synthesized resource data in the general categories of capability, present use, potential and demand.

(iii) stated the broad resource management objectives for the planning area (section 5 of this document). Management objectives for particular resources were provided by the Alberta Government agencies that are responsible for management of those resources.

(iv) defined planning units to facilitate further definition of resource management objectives in a geographic or spatial sense. The planning area was divided into the following three planning units: (1) Pembina-North Saskatchewan, (2) Brazeau Reservoir and (3) Upper Brazeau-Dismal (Figure 3).

(v) developed more specific resource management objectives for the individual planning units within the context of the broad resource management objectives, which apply to the entire planning area. The degree of definition or refinement of objectives varied among resource management agencies, depending upon factors such as available information and the allocation of manpower and financial resources by each agency.



BRAZEAU-PEMBINA PLANNING AREA

Figure 3. Planning Units for the Brazeau - Pembina Planning Area.

(vi) refined the spatial and resource use aspects of the resource management objectives by utilizing the Eastern Slopes Policy zoning categories and resource use matrix. The geographic locations of the zones were realigned to support the resource management objectives. Significant differences between the 1977 Eastern Slopes Policy zoning and the new zoning configuration reflect the refinement of objectives based on new and more detailed resource information. The new zoning configuration (map pocket) should allow achievement of stated resource management objectives to a level which is acceptable to the involved agencies. Further examination of information and objectives may indicate the need for additional refinement of the zone boundaries during the next stage of the planning process.

5. BROAD RESOURCE MANAGEMENT OBJECTIVES

Broad resource management objectives for the entire Brazeau-Pembina Planning Area are stated in this section of the document. Objectives have been expressed in relation to particular resources and are not identified with specific agencies, although many represent the resource management mandates of the involved agencies. No priority is intended or implied by the sequence of the objectives.

5.1 Water and Watershed Resources

To maintain and/or improve the quality, quantity and flow regime of water resources. Major components of this objective are:

(a) preserving the inherent productivity of the land through soil conservation practices,

(b) minimizing erosion associated with surface disturbance and vegetation removal in close proximity to water courses,

(c) maintaining the integrity of natural stream channels,

(d) maintaining adequate water volumes in major rivers to ensure proper dilution of downstream pollution and

(e) minimizing flooding of downstream areas.

To provide for the present and future use of water resources by onstream and downstream users including hydro-electric power developments, domestic users, industrial users, recreationists and fish and wildlife populations.

5.2 Petroleum and Natural Gas Resources

To encourage the orderly exploration and development of petroleum and natural gas resources in a manner that is compatible with environmental considerations.

To maintain the opportunity for surface access in order that the private sector may develop and assess the potential of petroleum and natural gas resources.

5.3 Timber Resources

To maintain a high quality forest which provides a sustained yield supply of timber. Major components of this objective include:

(a) increasing the level of productivity of wood fibre for commercial use through more intensive forest management practices,

(b) maintaining or increasing the amount of land available for sustained yield timber production,

(c) protecting the forest from damage by fire, insects and disease,

(d) reclaiming and reforesting disturbed areas and

(e) maintaining or creating an optimal vegetation mosaic to meet the needs of all forest resource users.

To provide for maximum utilization of the sustainable annual allowable cut of both coniferous and deciduous wood fibre resources to meet existing commitments and future timber development requirements.

5.4 Wildlife Resources

To maintain and/or increase natural wildlife populations. This would include maintaining or increasing populations of ungulates, furbearers, birds and rare wildlife species. More specific objectives which apply throughout the planning area are:

(a) to increase elk populations and

(b) to maintain populations of moose, deer and semi-aquatic furbearers.

To maintain and/or increase the quality and quantity of suitable aquatic and terrestrial habitat required to support wildlife populations at optimal densities. This would include:

(a) protecting habitat areas and migratory routes which are critical for the survival of specific wildlife populations. Specific habitat areas to be protected include all natural mineral licks and sites required by rare wildlife species,

(b) enhancing or creating wildlife habitat in appropriate locations,

(c) maintaining or increasing the total annual production of forbs and deciduous species in all areas for the production of wildlife and

(d) minimizing disturbance of wildlife populations during sensitive time periods.

To maintain and/or increase opportunities for recreational, domestic and commercial use of wildlife resources. This would include:

(a) maintaining or increasing the level of hunting and

(b) maintaining the existing level of commercial trapping.

5.5 Fisheries Resources

To maintain and/or increase natural fish populations and establish new populations of native or exotic species in suitable locations.

To maintain and/or increase the quality and quantity of aquatic habitat needed to support fish populations at optimal densities. This would include:

(a) protecting habitat and migratory routes which are critical for the survival of specific fish populations. Specific habitat areas to be protected include spawning, overwintering and rearing areas and

(b) protecting lakes with fish stocking potential.

To maintain and/or increase opportunities for recreational use of fisheries resources.

5.6 Recreational Resources

To maintain and/or increase the quantity and quality of recreational resources. This would include:

(a) increasing the supply of outdoor recreational opportunities ranging from serviced facility to dispersed backcountry recreation areas,

(b) protecting areas with high recreational potential and

(c) providing for the establishment of recreational cottage subdivisions and other intensive recreational land uses.

To maintain and/or increase the level and diversity of use of recreational resources.

5.7 Forage Resources

To increase the quantity and quality of forage resources.

To maintain and/or increase the level of grazing by wildlife and domestic livestock.

5.8 Agricultural Resources

To make suitable lands available for agricultural development.

To increase the level of cultivation on suitable land.

5.9 Ecological Resources

To preserve selected unique or representative natural ecosystems or features.

To provide for the recreational, scientific and educational use of ecological resources.

5.10 Historical Resources

To protect historical resources (historic, prehistoric and palaeontological) from impacts associated with development.

To provide for scientific, educational and recreational use of historical resources.

5.11 Tourism Resources

To promote development of parts of the Brazeau-Pembina Planning Area as a year-round travel destination area.

To ensure the continuation of existing tourism operations to meet the recreational and social needs of residents and visitors to the area.

To provide opportunities for the private sector to participate in developments which cater to the needs of the users of the area.

5.12 Coal Resources

To provide for the orderly exploration and development of coal resources in accordance with A Coal Development Policy for Alberta.

5.13 Metallic and Quarriable Mineral Resources

To maintain the opportunity for surface access in order that mineral resources may be developed and potential assessed.

5.14 Surface Materials Resources

To provide for the orderly exploration and development of surface materials, including sand, gravel, clay and marl, in a manner that is compatible with environmental considerations.

5.15 Access

To coordinate the development of access to minimize duplication of effort and expense and to minimize the negative effects on various resources and users.

To meet the access requirements of resource users.

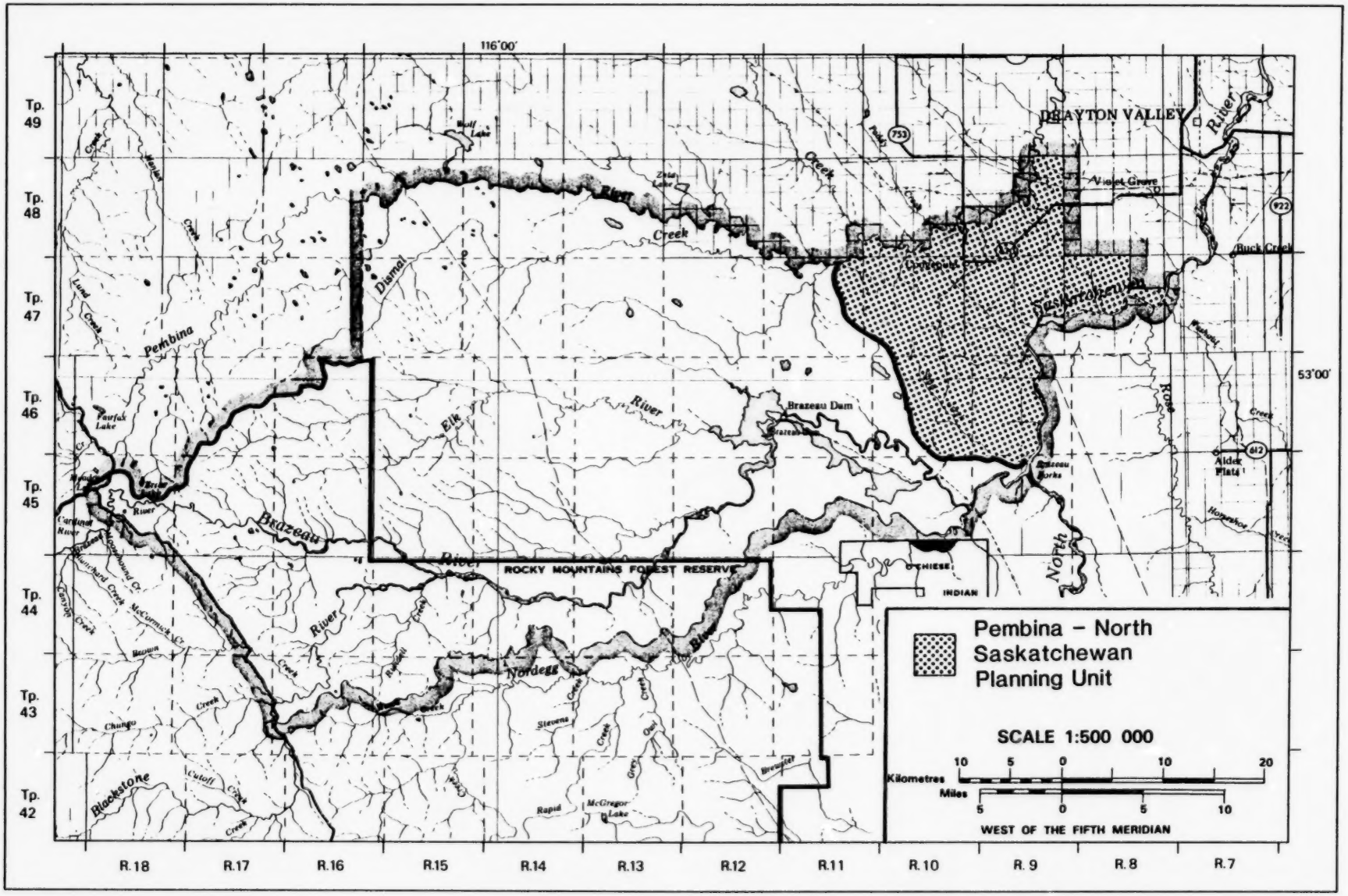
6. RESOURCE MANAGEMENT POLICY

This section of the document is organized according to the three planning units which are presented in Figure 3. A general description, specific resource management objectives and the locations of zones are provided for each planning unit as part of the Resource Management Policy for the Brazeau-Pembina Sub-regional Plan.

6.1 Pembina - North Saskatchewan Planning Unit

6.1.1 General Description of the Pembina - North Saskatchewan Planning Unit

The Pembina - North Saskatchewan Planning Unit is an area of approximately 439 km^2 in the eastern portion of the Brazeau-Pembina Planning Area (see Figure 4). The major water courses in the unit are the Pembina River along the northern boundary, the North Saskatchewan River along the southern boundary and Sand Creek in the southwest corner of the unit. The planning unit is within the Boreal Foothills ecoregion which is a transition between the deciduous Boreal Mixedwood and the coniferous Boreal Uplands ecoregions. Forest cover consists of mixedwood stands of aspen, balsam poplar, lodgepole pine, white spruce and black spruce. Deciduous tree species are dominant and scattered muskegs are common. The major physiographic features are the Brazeau Plain and the Cynthia Upland in the western portion of the unit.



BRAZEAU-PEMBINA PLANNING AREA

Figure 4. Pembina - North Saskatchewan Planning Unit.

6.1.2 Resource Management Objectives for the Pembina - North Saskatchewan Planning Unit

The general intent for resource management in the Pembina - North Saskatchewan Planning Unit is:

> To allow utilization of the full range of available resources with emphasis on petroleum and natural gas exploration and development and timber harvesting while recognizing watershed and other environmental considerations.

The broad resource management objectives, which are stated in section 5, apply throughout the entire planning area. For brevity, they have not been repeated with those resource management objectives which are specific to the Pembina - North Saskatchewan Planning Unit. The resource management objectives have the potential to conflict in many ways depending upon where, when and how they are expected to be achieved. No priority is intended or implied by the order of the following resource management objectives.

Water Resources

To protect existing water quality and streamflows by proper management of resource development, recognizing the relatively low sensitivity of the watershed in this unit.

Timber Resources

To increase utilization of primarily deciduous timber resources.

Wildlife Resources

To maintain wolf and bear populations at acceptable levels.

To protect and enhance ungulate winter range in the vicinity of the Brazeau Fire Tower, Pembina and North Saskatchewan Rivers and Sand Creek.

To maintain a mosaic of habitat types necessary for the continued existence of wildlife populations of the area.

Fisheries Resources

To protect fish populations in the North Saskatchewan River by minimizing the negative effects of hydro-electric power generation.

Recreational Resources

To continue and increase use of the area for extensive land and water-based recreation including the following activities:

(a) hunting, cross-country skiing, hiking, backcountry camping, snowmobiling and use of all-terrain vehicles and

(b) fishing, canoeing, kayaking and jet boating.

To provide recreational facility developments at selected locations. Facilities would include river access points, dispersed primitive campgrounds and day use sites.

To protect selected areas along major rivers and around lakes for small scale recreational developments.

Forage Resources

To provide for grazing of forage resources by both ungulates and domestic livestock.

Agricultural Resources

To increase future cultivation of lands with relatively high capability for agricultural development. Although such lands are present within the planning unit, the objective of developing large areas of suitable lands for improved grazing or cultivation may not be achievable in recognition of the possible commitment of these same lands to timber production. Further investigation of agricultural potential of these areas is planned.

Ecological Resources

To protect, as appropriate, ecological resources which have been identified in the Sand Creek area.

Historical Resources

To protect historical resources found at the site of "Boggy Hall", a North West Company trading post, near the junction of the Brazeau and North Saskatchewan Rivers.

6.1.3 Zoning for the Pembina - North Saskatchewan Planning Unit

The existing and revised zoning configurations for the Pembina - North Saskatchewan Planning Unit can be seen on the zoning maps for the entire Brazeau - Pembina Planning Area (map pocket). The revised configuration should allow achievement of the stated resource management objectives to varying degrees. The rationale and locations for the zones are:

Critical Wildlife - in the following locations for the indicated reasons:

(a) along the Pembina River to the immediate west of Lodgepole to protect ungulate winter range and a migratory route,

(b) an upland area to the west of Lodgepole to protect a critical wintering area for ungulates and habitat for upland furbearers and

(c) riparian areas along Sand Creek, the North Saskatchewan River and associated tributaries to protect ungulate winter range and a migration corridor.

Multiple Use - the portions of the planning unit which are outside of Critical Wildlife and Facility zones, to allow for a broad range of resource utilization.

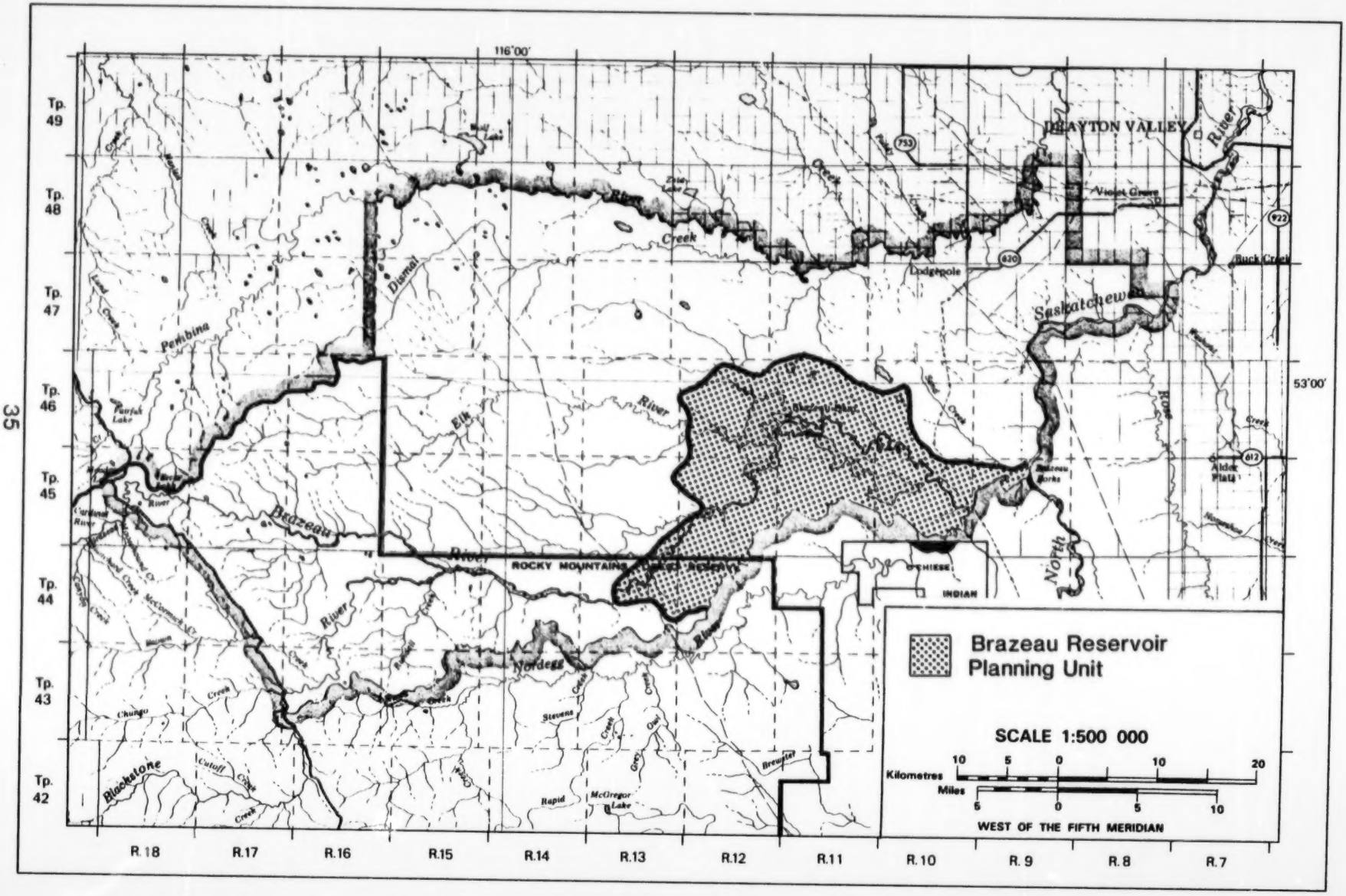
Facility - an area around the hamlet of Lodgepole to accommodate existing and proposed development.

6.2 Brazeau Reservoir Planning Unit

6.2.1 General Description of the Brazeau Reservoir Planning Unit

The Brazeau Reservoir Planning Unit is an area of approximately 453 km^2 in the south central portion of the Brazeau-Pembina Planning Area (see figure 5). The dominant feature of the unit is the Brazeau Reservoir which was formed in 1963 by damming of the Brazeau River at the Big Bend site. The reservoir covers an area of 84 km^2 when filled to capacity and was created to augment the winter flow of the North Saskatchewan River and to provide water for hydro-electric power generation. A 19 km power canal is used to move water from the dam to the power generating station. The Brazeau River below the dam functions as an emergency spillway.

The planning unit is within the Boreal Foothills ecoregion and is covered by mixedwood stands of aspen, balsam poplar, lodgepole pine, white spruce and black spruce. Muskeg areas are common. The dominance of deciduous tree species, such as aspen, decreases as one moves west within the Boreal Foothills ecoregion. The planning unit is located on the Brazeau Plain, a relatively flat glacio-lacustrine plain situated between the eastern Cynthia Uplands and the Wolf Lake Uplands to the west.



BRAZEAU-PEMBINA PLANNING AREA

Figure 5. Brazeau Reservoir Planning Unit.

6.2.2 Resource Management Objectives for the Brazeau Reservoir Planning Unit

The general intent for resource management in the Brazeau Reservoir Planning Unit is:

> To provide for utilization of the full range of available resources with emphasis on petroleum and natural gas exploration and development, timber harvesting and intensive water-based recreation focused on the Brazeau Reservoir, while recognizing watershed and other environmental considerations.

The broad resource management objectives, which are stated in section 5, apply throughout the entire planning area. For brevity, they have not been repeated with those resource management objectives which are specific to the Brazeau Reservoir Planning Unit. The resource management objectives have the potential to conflict in many ways depending upon where, when and how they are expected to be achieved. No priority is intended or implied by the order of the following resource management objectives.

Water Resources

To protect existing water quality and streamflows by proper management of resource development, recognizing the relatively low sensitivity of the watershed in this unit.

To maintain the potential for future hydro-electric power development in recognition of the existing agreement between Trans Alta Utilities and the Alberta Government.

Timber Resources

To increase utilization of coniferous and deciduous timber resources.

Wildlife Resources

To maintain wolf and bear populations at acceptable levels.

To maintain a diversity of habitat areas adjacent to the Reservoir in order to support a variety of wildlife species.

To protect osprey and heron colonies and breeding Canada geese in the vicinity of the Reservoir by minimizing disturbance and enhancing habitat as required.

To protect several small areas, adjacent to the western portion of the Reservoir, which are used by local wolf populations.

To protect and enhance ungulate winter range along the Brazeau River and adjacent upland sites.

To assess the potential for otter population enhancement in the area.

Fisheries Resources

To protect spawning areas for northern pike on the Brazeau Reservoir.

To protect fish populations in the Brazeau Reservoir by minimizing the negative effects of water level fluctuation.

To protect three lakes, with identified fish stocking potential, located to the immediate north of the Brazeau Reservoir.

Recreational Resources

To increase use of the area for intensive, mainly water-based recreation.

To provide major recreational facilities at appropriate locations in close proximity to the Brazeau Reservoir. Developments would include:

(a) a large campground,

(b) numerous day use sites,

(c) staging areas and trail systems for cycling, hiking, cross-country skiing, all-terrain vehicles, snowmobiling and horse-back riding,

(d) boat launching facilities and

(e) small boat-in campsites.

Forage Resources

To provide for ungulate grazing of forage resources. This would include:

(a) reduction of the level of grazing by feral horses along the Brazeau River and

(b) restriction of grazing by domestic livestock. Domestic grazing does not presently occur in this planning unit.

Ecological Resources

To protect, as appropriate, ecological resources which have been identified in the Sand Creek area.

6.2.3 Zoning for the Brazeau Reservoir Planning Unit

The existing and revised zoning configurations for the Brazeau Reservoir Planning Unit can be seen on the zoning maps for the entire Brazeau - Pembina Planning Area (map pocket). The revised configuration should allow achievement of the stated resource management objectives to varying degrees. The rationale and locations for the zones are:

Critical Wildlife - in the following locations for the indicated reasons:

(a) north and south of the Brazeau River near its confluence with the North Saskatchewan River to protect critical ungulate winter range,

(b) small areas along the north and south side of the Brazeau River below the dam to protect ungulate winter range,

(c) areas along the south side of the power canal to protect ungulate wintering areas and osprey and heron colonies,

(d) several areas to the south of the Reservoir along the southern boundary of the planning unit to protect ungulate winter range,

(e) riparian zones and adjacent areas along the Brazeau River above the Reservoir to protect ungulate winter range and a migratory corridor and to protect furbearer habitat,

(f) riparian areas at the mouth of the Elk River to protect ungulate winter range,

(g) small area to the immediate west of the Reservoir to protect ungulate wintering habitat,

(h) area at the mouth of Crow Creek to protect ungulate wintering habitat and

(i) area to the north east of the reservoir along the main road to protect ungulate winter range.

General Recreation - in the following areas for the indicated reasons:

(a) an area on the eastern side of the Brazeau Reservoir to allow for development of intensive water-based recreation facilities including a campground, day-use sites and trail systems,

(b) a small area on the north side of the Reservoir to allow for development of small scale, water-based recreation facilities and

(c) a small area on the west side of the Reservoir to allow for development of small scale, water-based, recreation facilities.

Multiple Use - the portions of the planning unit which are outside of Critical Wildlife, General Recreation and Industrial zones to allow for a broad range of resource utilization.

Industrial - the site occupied by the installation and a small surrounding area to recognize the Brazeau Dam, pumphouse and powerhouse.

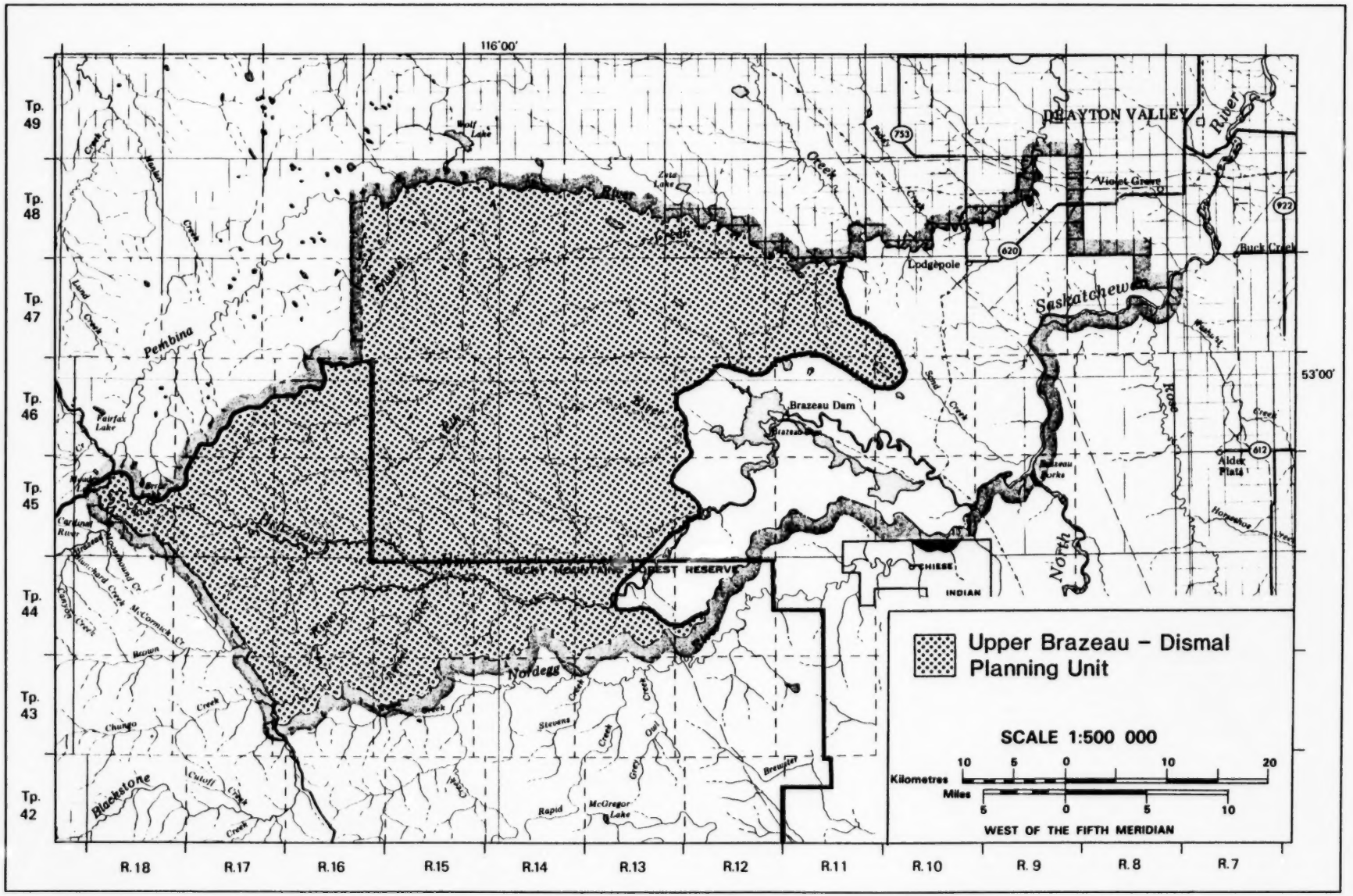
6.3 Upper Brazeau - Dismal Planning Unit

6.3.1 General Description of the Upper Brazeau-Dismal Planning Unit

The Upper Brazeau-Dismal Planning Unit is an area of approximately 2056 km^2 in the western portion of the Brazeau-Pembina Planning Area (see figure 6). The major water courses in the unit are the Pembina River and Dismal Creek to the north, the Elk and Owl Rivers in the central part of the unit and the Brazeau and Blackstone Rivers in the south. The eastern portion of the planning unit is within the Boreal Foothills ecoregion and the western two-thirds of the unit is within the Boreal Uplands ecoregion. The basic difference in forest cover between the two ecoregions is that lodgepole pine replaces aspen as the dominant tree species as one moves west into the higher elevation Boreal Uplands. The Boreal Uplands ecoregion is characterized by extensive closed canopy coniferous forests composed of lodgepole pine, spruce (white and black) and sub-alpine fir. Aspen and other deciduous species are generally absent. Organic areas are numerous and scattered. The major physiographic features in the planning unit are the Wolf Lake Uplands and the Rocky Mountain Foothills along the western edge of the unit.

6.3.2 Resource Management Objectives for the Upper Brazeau - Dismal Planning Unit

The general intent for resource management in the Upper Brazeau - Dismal planning unit is:



BRAZEAU-PEMBINA PLANNING AREA

Figure 6. Upper Brazeau - Dismal Planning Unit.

To allow utilization of the full range of available resources with emphasis on petroleum and natural gas exploration and development, timber harvesting and extensive dispersed recreation, while recognizing watershed and other environmental considerations.

The broad resource management objectives, which are stated in section 5, apply throughout the entire planning area. For brevity, they have not been repeated with those resource management objective which are specific to the Upper Brazeau - Dismal Planning Unit. The resource management objectives have the potential to conflict in many ways depending upon where, when and how they are expected to be achieved. No priority is intended or implied by the following resource management objectives.

Water Resources

To protect existing water quality and streamflows by proper management of resource development recognizing the following watershed sensitivities: Nelson Creek: high; Rifle Creek and Blackstone River: moderate to high; Dismal Creek: low to moderate; and Pembina and Upper Brazeau Rivers: low.

Timber Resources

To increase utilization of coniferous timber resources.

To maintain wolf and bear populations at acceptable levels.

To protect and enhance elk and moose winter range along Dismal, Nelson, Crow and Rifle Creeks and along the Pembina, Elk, Owl, Brazeau and Blackstone Rivers.

To minimize competitive grazing on ungulate winter range by feral horses on the upper Brazeau River.

To maintain and enhance furbearer habitat:

(a) in areas along Rundell, Rifle, Nelson and Dismal Creeks and the headwaters of the Elk River,

(b) for marten and associated species along the Pembina and Upper Brazeau Rivers and Rifle Creek and

(c) for rare or unique furbearer species.

Fisheries Resources

To protect the following habitat areas which are critical for specific fish populations:

(a) spawning and rearing areas for Dolly Varden and Rocky Mountain whitefish on Rundell Creek and associated minor tributaries and on an unnamed tributary to the Brazeau River located in SW 4-45-16-W5. An isolated channel at this location supports a landlocked population of Dolly Varden and should be protected,

(b) spawning and overwintering areas for Dolly Varden, mountain whitefish and arctic grayling on Dismal and Nelson Creeks,

(c) spawning areas for northern pike at the mouths of Rifle Creek, Crow Creek and the Elk River,

(d) overwintering areas for northern pike and Dolly Varden on Rifle Creek,

(e) overwintering and rearing areas for Dolly Varden and mountain whitefish on Brown Creek, the Blackstone River and the Brazeau River, primarily above the confluence with the Blackstone and

(f) spawning and overwintering areas for mountain whitefish, Dolly Varden and rainbow trout on the Owl and upper Elk Rivers.

To protect several small lakes, with identified fish stocking potential, which are located near Nelson Creek and between Dismal Creek and the Pembina River.

To continue the cutthroat trout establishment program on the Blackstone River.

Recreational Resources

To continue and increase use of the area for extensive land and water-based recreation including the following activities:

(a) hunting, cross-country skiing, hiking, backcountry camping, snowmobiling and use of all-terrain vehicles and

(b) fishing, canoeing, kayaking and jet boating.

To provide limited recreational facility developments at selected locations. Facilities would include river access points, dispersed primitive campgrounds and day use sites.

To continue and increase use of the existing recreation areas on the Brazeau, Blackstone and Elk Rivers and on Brown Creek.

To protect selected areas along major rivers and around lakes for small scale recreational developments.

Forage Resources

To provide for ungulate grazing of forage resources. This would include:

(a) reduction of the level of grazing by feral horses along the Brazeau River and

(b) restriction of grazing by domestic livestock. Domestic grazing does not presently occur in this planning unit.

Ecological Resources

To protect, as appropriate, ecological resources which have been identified along the upper Brazeau and Owl Rivers and in the Sand Creek area.

6.3.3 Zoning for the Upper Brazeau - Dismal Planning Unit

The existing and revised zoning configurations for the Upper Brazeau - Dismal Planning Unit can be seen on the zoning maps for the entire Brazeau - Pembina Planning Area (map pocket). The revised configuration should allow achievement of the stated resource management objectives to varying degrees. The rationale and locations for the zones are:

Critical Wildlife - in the following locations for the indicated reasons

(a) along Dismal, Nelson, Crow and Rifle Creeks and the Pembina, Elk, Owl, Brazeau and Blackstone Rivers to protect ungulate winter range and migratory corridors,

(b) along Rundell, Rifle, Nelson and Dismal Creeks and the upper Elk, upper Pembina and Brazeau Rivers to protect furbearer habitat,

(c) upland areas adjacent to the Pembina and Upper Brazeau Rivers and Rifle Creek to protect marten and associated species and

(d) along Rundell Creek and an unnamed tributary to the Brazeau River to protect spawning and rearing areas for Dolly Varden and mountain whitefish.

General Recreation - at the mouth of the Elk River to allow development of small scale water-based recreation facilities such as boat-in campsites.

Multiple Use - the portions of the planning unit which are outside of Critical Wildlife, General Recreation and Industrial zones to allow for a broad range of resource utilization.

Industrial - at the following locations:

(a) the existing Hudson's Bay Oil and Gas Company gas processing plant (note: most of the plant is on patented land and is not zoned) and

(b) the recently approved Hudson's Bay Oil and Gas Company gas processing plant which is slated for construction in the near future.

7. CONCLUSION

As an intermediate document, the Resource Management Policy serves as an interim statement of progress towards the final plan. The resource management objectives and zoning, contained in the Resource Management Policy, provide direction to the Brazeau-Pembina planning team for use in the development of the draft plan which is the next stage of the planning process. The draft plan will include further refinement of the resource management objectives, guidelines for resource management to resolve identified conflicts and a statement of implementation procedures for the plan.